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(54) Title: A COMBINATION OF A CHAMBER AND A PISTON, A PUMP, A MOTOR, A SHOCK ABSORBER AND A TRANSDUCER INCORPORATING THE COMBINATION

(57) Abstract

A combination of a piston and a chamber, wherein the chamber defines an elongate chamber having a longitudinal axis, the chamber having, at a first longitudinal position thereof, a first cross-sectional area thereof and, at a second longitudinal position thereof, a second cross-sectional area, the second cross-sectional area being 95% or less of the first cross-sectional area, the change in cross-section of the chamber being at least substantially continuous between the first and second longitudinal positions, the piston being adapted to adapt itself to the cross-section of the chamber when moving from the first to the second longitudinal position of the chamber. The piston may comprise an umbrella-like support structure or a fibre enforced deformable container comprising a foam or a fluid. The combination may be used in a pump, a linear actuator, a motor, or a shock absorber.

